DESIGNING EFFECTIVE MAPS SPRING 2023

GEOG 181

Published Apr 29, 2023

CLASS SCHEDULE

Section	Location	Time	Instructor(s)
GEOG 181 081 *[LEC]*	ONLN - Online		Justin Murfitt jmurfitt@uwaterloo.ca
			This table is generated automatically

INSTRUCTOR / TA INFORMATION

CONTACT INFORMATION

Instructor: Justin Murfitt (jmurfitt@uwaterloo.ca)

Office Hours: Fridays 11:30 - 12:30pm (Online via Zoom)

TAs

Saba Dezyani - sdezyani@uwaterloo.ca (mailto:sdezyani@uwaterloo.ca)

Carl Tutton - cg2tutto@uwaterloo.ca (mailto:cg2tutto@uwaterloo.ca)

ANNOUNCEMENTS

Your instructor uses the **Announcements** widget on the **Course Home** page during the term to communicate new or changing information regarding due dates, instructor absence, etc., as needed.

You are expected to read the announcements on a regular basis.

To ensure you are viewing the complete list of announcements, you may need to click **Show All Announcements**.

DISCUSSIONS

A General Discussion (https://learn.uwaterloo.ca/d2l/le/903561/discussions/topics/522568/View) topic* has also been made available to allow students to communicate with peers in the course. Your instructor does not monitor this discussion topic.

HELP WITH ASSIGNMENTS

Any questions or comments regarding the assignments should be posted in the associated Assignment Discussions (https://learn.uwaterloo.ca/d2l/le/903561/discussions/List) topic*. Students are encouraged to respond to each other. Your TAs or instructor will also monitor this discussion. The Centre for Extended Learning **DOES NOT** provide any support for QGIS Software.

CONTACT US

Who and Why	Contact Details
Instructor and TA • **Course-related questions (e.g., course content, deadlines, assignments, etc.)** • **Questions of a personal nature**	**Post your course-related questions to the Ask the Instructor** (https://learn.uwaterloo.ca/d2l/le/903561/discussions/topics/522567/View) **discussion topic*. This allows other students to benefit from your question as well.** **Questions of a personal nature can be directed to your instructor or your TA.** **Instructor: Justin Murfitt** **jmurfitt@uwaterloo.ca** **Your instructor checks email and the Ask the Instructor** (https://learn.uwaterloo.ca/d2l/le/903561/discussions/topics/522567/View) **discussion topic* frequently and will make every effort to reply to your questions within 24–48 hours, Monday to Friday, 9:00 AM-4:00 PM.** **Your instructor will provide contact information for your TAs in the Announcements widget on the Course Home page as it becomes available. Please check the announcements regularly.**

Assignments and QGIS Software	Post your assignment and software related questions to the associated Assignment Discussions topic*. This allows other students to benefit from your question as well. Students are encouraged to respond to each other. **QGIS Documentation** (http://www.qgis.org/en/docs/index.html)
Technical Support, Centre for Extended Learning • **Technical problems with Waterloo LEARN**	**learnhelp@uwaterloo.ca** (mailto:learnhelp@uwaterloo.ca?body=Name:%20%0D%0AUser%20ID:%20%0D%0ACourse:) **Include your full name, WatIAM user ID, student number, and course name and number.** **Technical support is available during regular business hours, Monday to Friday, 8:30 AM to 4:30 PM (Eastern Time).** **IST Knowledge Base: For Students** (https://uwaterloo.atlassian.net/wiki/spaces/ISTKB/pages/284530122/For-students)
Learner Support Services, Centre for Extended Learning • **General inquiries** • **Examination information**	**Student Resources** (https://uwaterloo.ca/extended-learning/learn-online/student-resources) **extendedlearning@uwaterloo.ca** (mailto:extendedlearning@uwaterloo.ca?body=Name:%20%0D%0AUser%20ID:%20%0D%0ACourse:) **Include your full name, WatIAM user ID, student number, and course name and number.**

*Discussions can be accessed by clicking **Connect** and then **Discussions** on the course navigation bar above.

COURSE DESCRIPTION

> *Calendar Description for GEOG 181*
>
> Focus is on the issues and foundations of modern digital cartography. Topics covered include geographic coordinate systems, map projections, mapping quantitative data, developing online maps, and the impact of maps on society. Students will learn computer techniques to produce effective maps based on established principles of cartographic design. [Also offered online]
>
> Antireq: GEOG 165

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LEARNING OUTCOMES

By the end of this course students should be able to:

Compare and contrast different classes of maps.
Identify and distinguish different types of geographic coordinate systems and map projections.
Identify and apply the computer-based techniques for the production of quantitative maps.
Recognize and apply the principals of map design to the creation and evaluation of maps.

TENTATIVE COURSE SCHEDULE

COURSE SCHEDULE

IMPORTANT: ALL TIMES EASTERN - Please see the University Policies (https://learn.uwaterloo.ca/d2l/common/dialogs/quickLink/quickLink.d2l?ou=799666&type=content&rcode=uWaterloo-2702649) section of your Course Outline for details

Week	Readings and Other Assigned Material	Activities and Assignments

Week 1: An Introduction to Maps (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895560/View)	**Krygier, J., & Wood, D. (2016).** *Making Maps: A Visual Guide to Map Design for GIS* **(Third ed.). Chapter 1.**	**Introduce Yourself** (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895572/V **Assignment 1: Introduction to QGIS** (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895550/V
Week 2: History of Cartography (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895564/View)	**Krygier, J., & Wood, D. (2016). Chapters 2 and 3.**	
Week 3: Size and Shape of the Earth, Geographic Coordinates (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895565/View)		**Assignment 2: Accessing Data** (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895551/V
Week 4: Map Projections (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895566/View)	**Krygier, J., & Wood, D. (2016). Chapter 5.**	
Week 5: Issues Related to the Accuracy of Maps (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895567/View)		**Assignment 3: Projections** (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895552/V
Week 6: Principles of Map Design (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895568/View)	**Krygier, J., & Wood, D. (2016). Chapters 6, 7, 9, 11, and 12.**	
Week 7: Mapping Quantitative Data (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895569/View)		**Assignment 4: Quantitative Mapping (Proportional Symbols)** (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895553/V
Week 8: Choropleth Maps and Classification (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895570/View)	**Krygier, J., & Wood, D. (2016). Chapter 8.**	**Assignment 5: Choropleth** (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895554/V

Week 9: Mapping Terrain (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895571/View)		Assignment 6: Terrain Map (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895555/V
Week 10: Online Mapping and the Geoweb (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895561/View)	Krygier, J., & Wood, D. (2016). Chapter 10.	Assignment 7: Web Mapping (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895556/V
Week 11: Maps and Society (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895562/View)		Assignment 8: Final Map Layout (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895557/V
Week 12: Future Directions in Mapping (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895563/View)		
Final Examination (https://learn.uwaterloo.ca/d2l/le/content/903561/viewContent/4895559/View)		

TEXTS / MATERIALS

Title / Name	Notes / Comments	Required
Krygier, J., & Wood, D. (2016). Making Maps: A Visual Guide to Map Design for GIS (Third ed.). Guilford Press.		Yes
QGIS, a free and open source geographic information system. Assignment 1: Introduction to QGIS takes you through the process of downloading and installing QGIS software onto your computer.		Yes

SYSTEM REQUIREMENTS

Assignments in this course require that you use QGIS software. You will need access to a desktop or laptop computer with a Windows, MacOS X, or Linux operating system where you can install QGIS software. It is highly recommended that you confirm that you can successfully install QGIS on your computer before enrolling in this course. Refer to the QGIS (http://qgis.org/) website for download and installation instructions.

For textbook ordering information, please contact the W Store | Course Materials + Supplies (https://wstore.uwaterloo.ca/) **.**

For your convenience, you can compile a list of required and optional course materials through BookLook (https://wstore.uwaterloo.ca/course-materials/my-booklook.html) using your Quest userID and password. If you are having difficulties ordering online and wish to call the Waterloo Bookstore, their phone number is +1 519-888-4673 or toll-free at +1 866-330-7933. Please be aware that textbook orders **CANNOT** be taken over the phone.

RESOURCES

- Library services for Co-op students on work term and students taking online courses (https://uwaterloo.ca/library/services/co-op-students-work-term-and-students-taking-online-courses)

STUDENT ASSESSMENT

Component	Value
Introduce Yourself	Ungraded
Assignment 1: Introduction to QGIS	9%
Assignment 2: Accessing Data	9%
Assignment 3: Projections	9%
Assignment 4: Quantitative Mapping (Proportional Symbols)	9%

Component	Value
Assignment 5: Choropleth	9%
Assignment 6: Terrain Map	9%
Assignment 7: Web Mapping	9%
Assignment 8: Final Map Layout	12%
Final Examination	25%

OFFICIAL GRADES

Official Grades and Academic Standings are available through Quest (https://uwaterloo.ca/quest/) .

ASSIGNMENT SCREENING

Turnitin
Turnitin.com: Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin® in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

Turnitin® at Waterloo

ADMINISTRATIVE POLICY

UNIVERSITY POLICIES

SUBMISSION TIMES

Please be aware that the University of Waterloo is located in the **Eastern Time Zone** (GMT or UTC-5 during standard time and UTC-4 during daylight saving time) and, as such, the time that your activities and/or assignments are due is based on this zone. If you are outside the Eastern Time Zone and require assistance with converting your time, please try the Ontario, Canada Time Converter (http://www.worldtimeserver.com/convert_time_in_CA-ON.aspx) .

ACCOMMODATION DUE TO ILLNESS

If your instructor has provided specific procedures for you to follow if you miss assignment due dates, term tests, or a final examination, adhere to those instructions. Otherwise:

MISSED ASSIGNMENTS/TESTS/QUIZZES

Contact the instructor as soon as you realize there will be a problem, and preferably within 48 hours, but no more than 72 hours, have a medical practitioner complete a Verification of Illness Form (https://uwaterloo.ca/campus-wellness/health-services/student-medical-clinic) .

Email a scanned copy of the Verification of Illness Form to your instructor. In your email to the instructor, provide your name, student ID number, and exactly what course activity you missed.

Further information regarding Management of Requests for Accommodation Due to Illness can be found on the Accommodation due to illness (https://uwaterloo.ca/registrar/current-students/accommodation-due-to-illness) page.

MISSED FINAL EXAMINATIONS

Contact your instructor as soon as possible if you are unable to fulfill academic requirements due to illness or other extenuating circumstances.

Further information about Examination Accommodations (http://ugradcalendar.uwaterloo.ca/page/Acad-Regs-Accommodations) is available in the Undergraduate Calendar.

ACCESSIBILITY SERVICES

AccessAbility Services (https://uwaterloo.ca/accessability-services/) , located in Needles Hall, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodation to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term and for each course.

ACCESSIBILITY STATEMENT

The Centre for Extended Learning strives to meet the needs of all our online learners. Our ongoing efforts to become aligned with the Accessibility for Ontarians with Disabilities Act (AODA) (http://www.ontario.ca/laws/statute/05a11) are guided by University of Waterloo accessibility Legislation (https://uwaterloo.ca/human-resources/accessibility/legislation) and policy and the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines (WCAG) 2.0

USE OF COMPUTING AND NETWORK RESOURCES

Please see the [Guidelines on Use of Waterloo Computing and Network Resources](https://uwaterloo.ca/information-systems-technology/about/policies-standards-and-guidelines/campus-network/guidelines-use-waterloo-computing-and-network-resources) (https://uwaterloo.ca/information-systems-technology/about/policies-standards-and-guidelines/campus-network/guidelines-use-waterloo-computing-and-network-resources) .

COPYRIGHT INFORMATION

Mental Health: The University of Waterloo, the Faculty of Environment and our Departments/Schools consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. **Please note that help is available**. Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services https://uwaterloo.ca/campus-wellness/ (https://uwaterloo.ca/campus-wellness/) is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

All students are encouraged to download the WatSAFE app which is available free through the google and iOS app stores. The WatSAFE app provides on- and off-campus contacts for students in distress, including international students, and other information related to campus safety and security.

Religious Observances: Students need to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

Communications with Instructor and Teaching Assistants: All communication with students must be through either the student's University of Waterloo email account or via LEARN. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account.

Recording lecture: Use of recording devices during lectures is only allowed with explicit permission of the instructor of the course. If allowed, video recordings may only include images of the instructor and not fellow classmates. Posting of videos or links to the video to any website, including but not limited to social media sites such as: facebook, twitter, etc., is strictly prohibited.

UNIVERSITY POLICY

Academic integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check [the Office of Academic Integrity](https://uwaterloo.ca/academic-integrity/) (https://uwaterloo.ca/academic-integrity/) for more information.]

Grievance: A student who believes that a decision affecting some aspect of their university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70, Student Petitions and Grievances, Section 4](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70) (https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70) . When in doubt, please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity to avoid committing an academic offence, and to take responsibility for their actions. [Check [the Office of Academic Integrity](https://uwaterloo.ca/academic-integrity/) (https://uwaterloo.ca/academic-integrity/) for more information.] A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate associate dean. For information on categories of offences and types of penalties, students should refer to [Policy 71, Student Discipline](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71) (https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71) . For typical penalties, check [Guidelines for the Assessment of Penalties](https://uwaterloo.ca/secretariat/guidelines/guidelines-assessment-penalties) (https://uwaterloo.ca/secretariat/guidelines/guidelines-assessment-penalties) .

Appeals: A decision made or penalty imposed under [Policy 70, Student Petitions and Grievances](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70) (https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70) (other than a petition) or [Policy 71, Student Discipline](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71) (https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71) may be appealed if there is a ground. A student who believes they have a ground for an appeal should refer to [Policy 72, Student Appeals](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-72) (https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-72) .

Note for students with disabilities: [AccessAbility Services](https://uwaterloo.ca/disability-services/) (https://uwaterloo.ca/disability-services/) , located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

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